ABSTRACT

A method of performing numerical computations in a mathematical system with at least one function, including expressing the mathematical system in discrete terms, expressing at least one variable of the mathematical system as a fixed-point number, performing the computations in such a way that the computations include the at least one variable expressed as a fixed-point number, obtaining, from the computations, a resulting number, the resulting number representing at least one of at least a part of a solution to the mathematical system, and a number usable in further computations involved in the numerical solution of the mathematical system, and extracting a set of data which represents at least one of a subset of digits of the resulting number, and a subset of digits of a number derived from the resulting number.